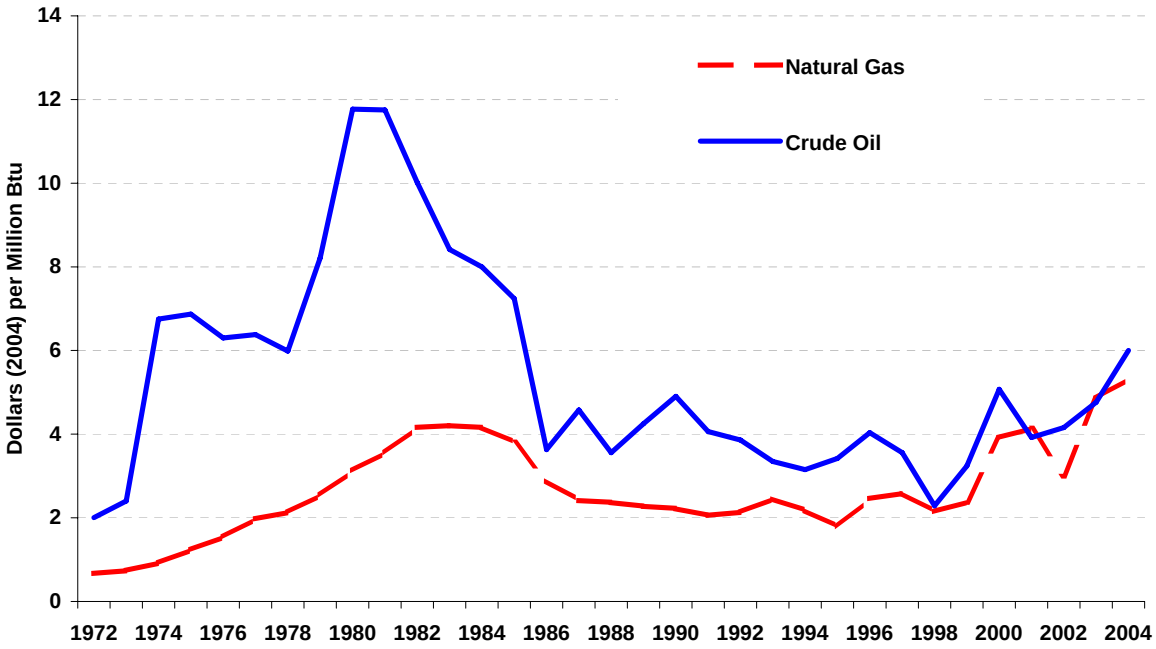
2. Market Developments and the Financial Reporting System (FRS) Companies in 2004

Petroleum and Natural Gas Markets in 2004

The FRS companies' financial results in 2004 were driven to a large extent by substantially higher prices for crude oil, natural gas, and petroleum products. While crude oil and petroleum product prices remained below the peak levels of 1980–1981 (in constant dollars), natural gas wellhead prices reached new highs **(Figures 17 and 18)**. Since 1998, both crude oil and natural gas wellhead prices have been rising, for the most part, and natural gas prices have tracked oil prices more closely than in previous years.

Figure 17. Imported Refiner Acquisition Cost of Crude Oil and Natural Gas Wellhead Prices, 1972-2004

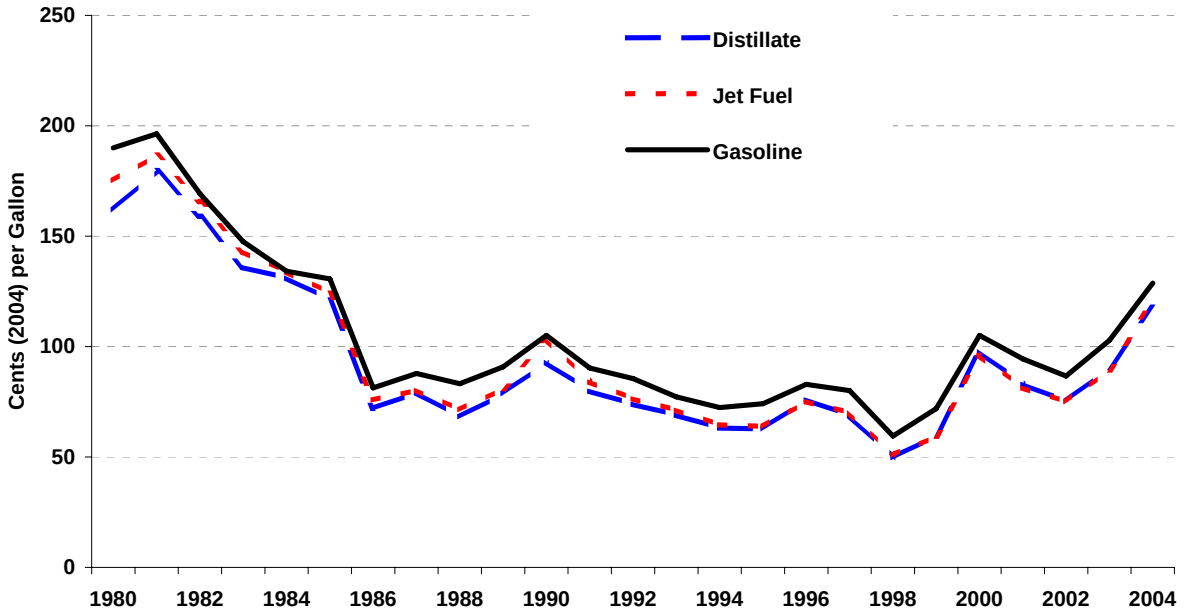


Source: Energy Information Administration.

World crude oil prices (as measured by the U.S. imported refiner acquisition cost) averaged $35.90 per barrel in 2004, the highest level since 1985 (in constant 2004 dollars). World economic growth was at a 15-year high,[39] which led to sharply higher oil demand. Production losses in the U.S. Gulf of Mexico due to the effects of Hurricane Ivan pushed prices up late in the year. Production increased in other countries to meet demand, which reduced world oil spare production capacity and raised the implied global utilization rate to about 99 percent.[40] Oil inventories remained relatively low in industrial countries, giving further impetus to the rise in oil prices.[41]

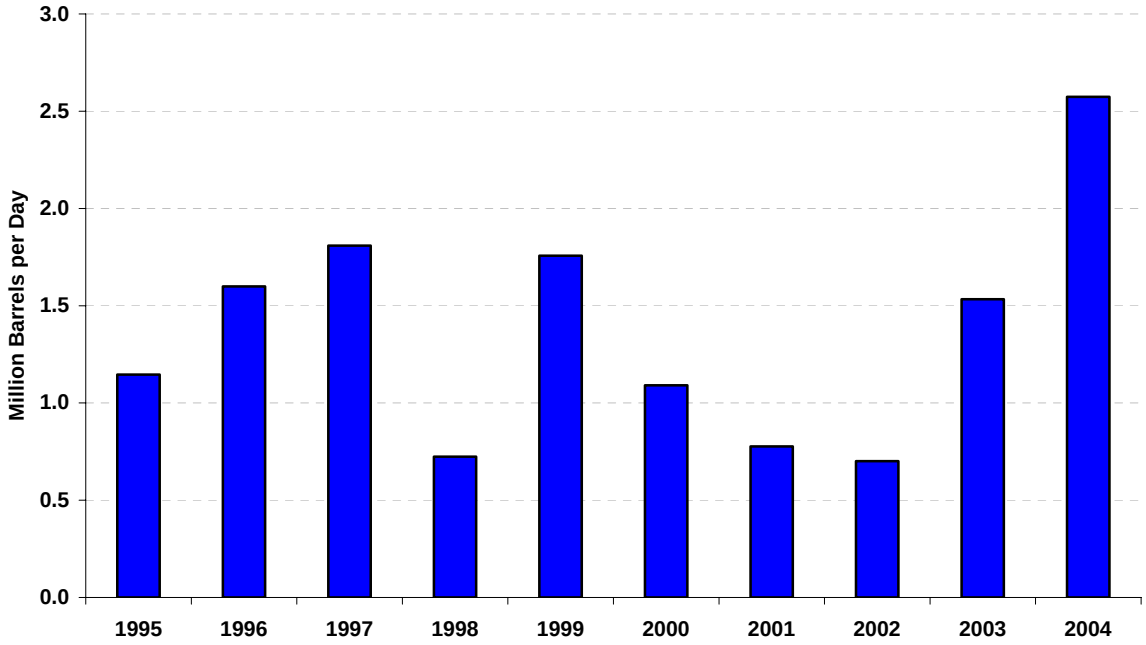
World oil demand jumped 2.6 million barrels per day in 2004 **(Figure 19)**, the largest year-to-year increase since 1976 and more than double the average annual increase from 1994 to 2003. China and the United States together accounted for 65 percent of the increase. China's oil consumption rose nearly 1.0 million barrels per day, moving it well past Japan as the second largest oil-consuming country in the

Figure 18. Refiner Prices of Petroleum Products for Resale, 1980-2004



Source: Energy Information Administration.

Figure 19. World Oil Consumption, Change from Previous Year, 1995-2004



Source: Energy Information Administration, *Monthly Energy Review*, DOE-EIA-0034 (2005/10) (Washington, DC, October 2005), Table 11.2.

world. For the 10-year period from 1995 to 2004, China contributed one-quarter of the increase in world oil consumption.[42]

Despite substantially higher oil demand, world oil supply more than kept pace, rising 3.4 million barrels per day in 2004 **(Table 7)**. In an attempt to slow the rapid increase in oil prices, the Organization of the Petroleum Exporting Countries (OPEC) increased production by 2.2 million barrels per day. The countries that comprise the former Soviet Union led the non-OPEC increase, adding 0.9 million barrels per day to the world oil supply.[43]

Table 7. World Petroleum Balance, 2003–2004
(Million Barrels per Day)

	Quarterly 2004				Annual	
	Q1	Q2	Q3	Q4	2003	2004
Demand	82.6	81.1	81.8	84.4	79.9	82.5
Supply	82.3	82.3	83.5	84.0	79.6	83.1
Supply from Inventories	0.3	-1.2	-1.7	0.4	0.2	-0.6

Note: Supply from Inventories includes statistical discrepancy.
Source: Energy Information Administration, *International Petroleum Monthly* (October 2005), Table 2.1.

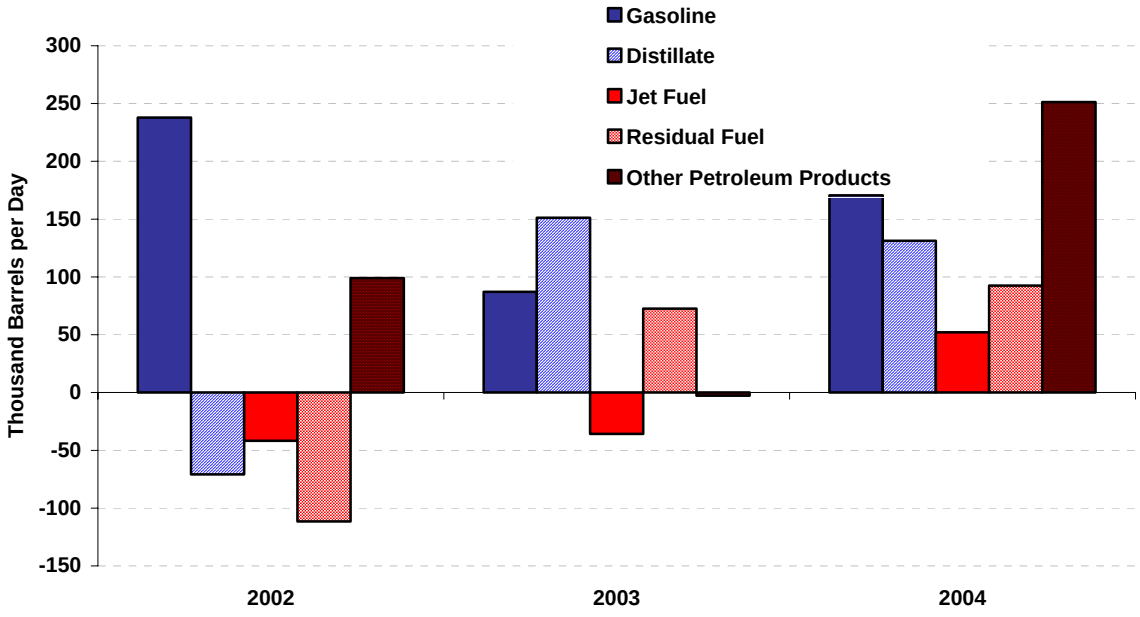
U.S. petroleum demand in 2004 increased by 698 thousand barrels per day, two and one-half times the average annual increase of the previous 10 years. The U.S. economy's 4.2-percent growth, the highest rate of growth since 1999,[44] contributed to higher demand for petroleum products. Gasoline led the increase, followed by distillate fuel oil **(Figure 20)**. Jet fuel demand increased for the first time in 4 years as domestic airline activity recovered.[45] Increases in demand for petrochemical feedstock, petroleum coke, and liquefied petroleum gases brought about a large rise in the "other petroleum products" category.[46]

Higher demand for petroleum products in the United States and worldwide led to the highest petroleum product prices (in constant 2004 dollars) since 1985. Gasoline prices rose early in the year on strong demand, low inventories, and more stringent specifications[47] and remained higher than 2003 through the remainder of the year.

On the supply side, U.S. crude oil production fell 262 thousand barrels per day in 2004, more than double the average annual decline of the previous 10-year period. Hurricane Ivan contributed to the sharper decline in crude production. In early October, about 500 thousand barrels per day of crude oil production in the Gulf of Mexico was shut in. The situation improved over the next several weeks but production was still down 200 thousand barrels per day at the end of November.[48] Total domestic supply in 2004 fell slightly from 2003 as increases in natural gas liquids (NGL) production, ethanol inputs, and refinery processing gain nearly made up for the decline in crude oil production **(Table 8)**.[49] Imports rose sharply to meet the increased demand. Net imports of crude oil surpassed 10 million barrels per day for the first time, and net imports of petroleum products reached the highest level since 1974. Net imports provided 58 percent of petroleum product supplied.[50]

U.S. natural gas wellhead prices averaged $5.49 per thousand cubic feet in 2004, the highest annual average price on record (in either nominal or constant dollars).[51] Tight supplies kept upward pressure on natural gas prices. U.S. production fell 0.6 percent in 2004,[52] while Canadian production was flat.[53] U.S. natural gas demand in 2004 was essentially flat **(Table 9)**, rising just 0.2 percent.[54] In contrast to 2003, when fuel switching lowered natural gas demand, higher petroleum prices reduced the switching option and put additional upward pressure on natural gas prices.[55] Later in the year, natural gas prices increased even more in response to production losses resulting from Hurricane Ivan.[56]

Figure 20. U. S. Petroleum Product Consumption, Change from Previous Year, 2002-2004



Sources: 2002-2003: Energy Information Administration, *Annual Energy Review*, DOE/EIA-0384 (2004) (Washington, DC, August 2005), Table 5.11; 2004: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (2004/1) (Washington, DC, June 2005), Table 3.

Table 8. U.S. Petroleum Balance, 2003–2004
(Million Barrels per Day)

	Quarterly 2004				Annual	
	Q1	Q2	Q3	Q4	2003	2004
Demand	20.6	20.5	20.8	21.0	20.0	20.7
Domestic Supply	8.9	9.0	8.7	8.8	8.9	8.8
Net Imports	11.7	12.2	12.3	12.2	11.2	12.1
Supply from Inventories	0.0	-0.7	-0.1	0.0	-0.1	-0.2

Note: Domestic supply includes crude, natural gas liquids (NGL), and other liquids production and refinery processing gain.
Source: Calculated from Energy Information Administration, *Monthly Energy Review* (October 2005), Tables 3.1a and 3.1b.

International natural gas prices also increased significantly in 2004. Prices of natural gas imported into the European Union rose more than 11 percent, and prices of liquefied natural gas imported into Japan increased more than 8 percent.[57]

The FRS Companies' Importance in the U.S. Economy

For the 2004 reporting year, 29 major energy companies reported their financial and operating data to the Energy Information Administration (EIA) FRS on Form EIA-28.[58] These companies (referred to as the FRS companies in this report) occupy a significant position in the U.S.[59] economy. In 2004, operating revenues of the FRS companies totaled $1,128 billion, which is equal to 15 percent of the $7.4 trillion in revenues of the Fortune 500 corporations.[60]

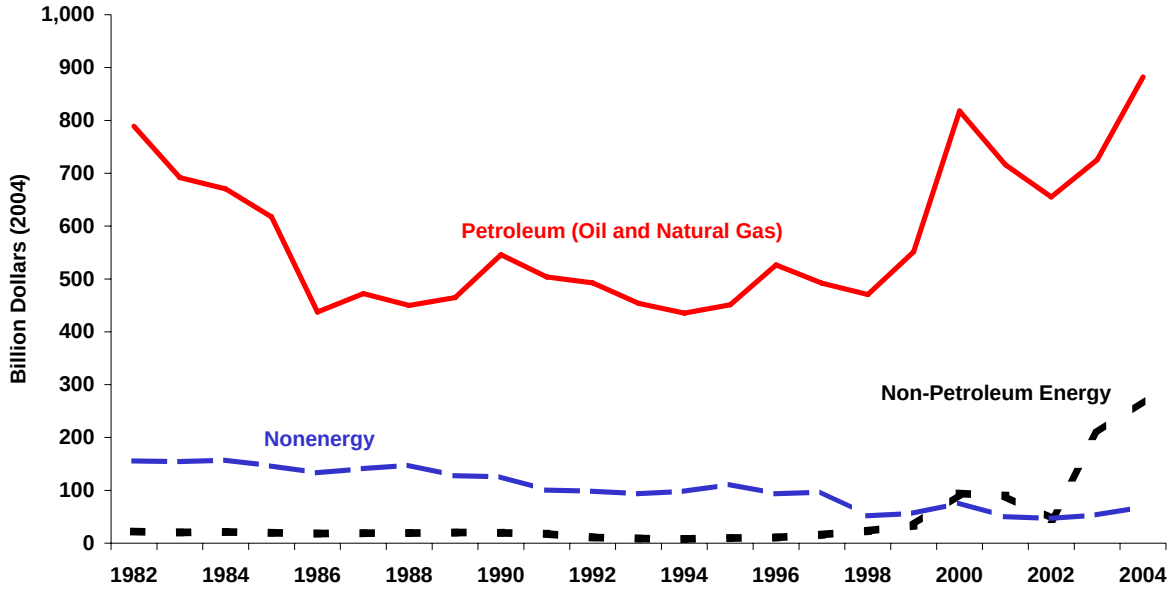
Table 9. U.S. Natural Gas Balance, 2003–2004
(Trillion Cubic Feet)

	Quarterly 2004				Annual	
	Q1	Q2	Q3	Q4	2003	2004
Demand	7.3	4.8	4.6	5.7	22.4	22.4
Domestic Supply	4.9	5.0	4.8	4.4	19.3	19.1
Net Imports	0.8	0.8	0.9	0.9	3.3	3.4
Supply from Inventories	1.5	-1.0	-1.0	0.4	-0.2	-0.1

Note: Domestic supply includes dry gas production, supplemental gaseous fuels, and the balancing item.
Source: Energy Information Administration, *Monthly Energy Review* (October 2005), Table 4.1.

The reporting companies engage in a wide range of business activities, but their most important activities are in the energy sector. About 94 percent, or $1,183 billion, of allocated operating revenues[61] were derived from energy lines of business. Nearly all of these revenues were derived from the companies' core petroleum operations (**Figure 21**). (For the purposes of this report, the petroleum line of business includes natural gas exploration, development, and production, but not downstream natural gas, which became a separate FRS line of business beginning with the 2003 reporting year, as did electric power.[62])

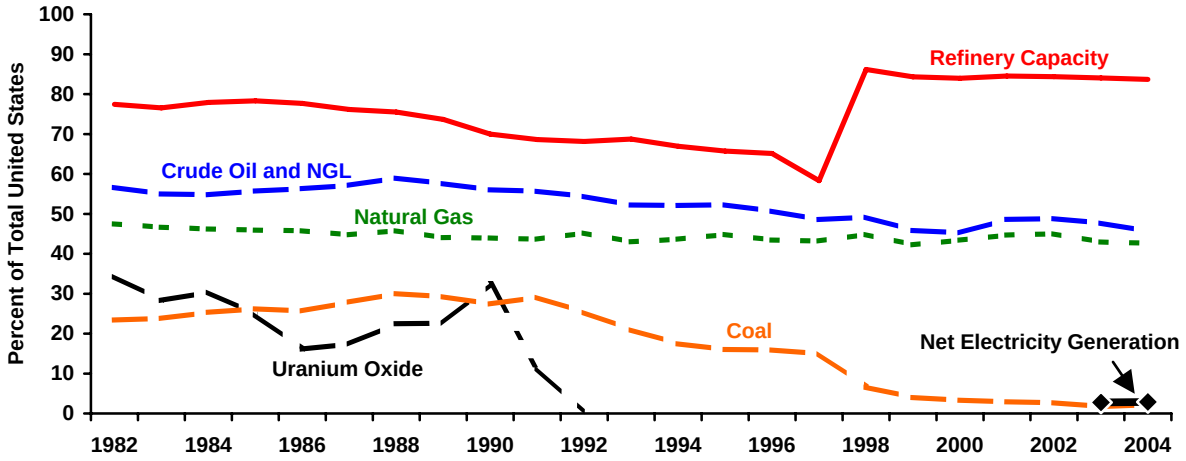
Figure 21. Operating Revenues by Line of Business for FRS Companies, 1982-2004



Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

In 2004, the FRS companies accounted for 46 percent of total U.S. crude oil and NGL production,[63] 43 percent of natural gas production, 84 percent of U.S. refining capacity, 3 percent of U.S. electricity net generation, and 2 percent of U.S. coal production (**Figure 22**). About 80 percent of the FRS companies' assets and 90 percent of new investments during 2004 were devoted to sustaining various aspects of petroleum production, processing, transportation, and marketing.

Figure 22. Shares of U.S. Energy Production[a] and Refinery Capacity for FRS Companies, 1982-2004



[a]Oil and gas production for the FRS companies includes only the production that is owned by the FRS companies; it does not include any interests not owned by the FRS companies (e.g., royalty interests owned by others). Total production for the United States includes the interests of all owners.

Note: The FRS companies last produced uranium in 1991.

Sources: Table B1; Total industry uranium oxide production is from Energy Information Administration, *Uranium Industry Annual 1992,* DOE/EIA-0478(92) (Washington, DC, October 1993).

Energy production other than petroleum has been a relatively small, but growing, part of the FRS companies' operations since 1994. During 2004, the combined operating revenues of the downstream natural gas, electricity, and other energy operations[64] of the FRS companies totaled $278 billion, or 22 percent of allocated revenues. Increased activity in downstream natural gas and electricity more than offset the continued decline in coal activity by the FRS companies, which began in 1994 and essentially continues to the present.[65] The growing importance of downstream natural gas and electric power operations to the FRS companies resulted in the addition of each as a separate line of business beginning with the 2003 reporting year.

Nonenergy businesses, mainly chemicals, accounted for 6 percent, or $71 billion, of the FRS companies' allocated revenues in 2003. During the 1980s, the FRS companies were major producers of domestic uranium. However, no FRS company has produced uranium oxide domestically since 1991.

Endnotes

[39] BP plc, *BP Statistical Review of World Energy* (June 2005), page 1.
[40] Energy Information Administration, *Short-Term Energy Outlook* (November 2004), page 2.
[41] Energy Information Administration, *Short-Term Energy Outlook* (November 2004), page 1.
[42] Energy Information Administration, *Monthly Energy Review* (October 2005), Table 11.2.
[43] Energy Information Administration, *Monthly Energy Review* (October 2005), Table 11.2.
[44] Energy Information Administration, *Monthly Energy Review* (October 2005), Table 1.8.
[45] Energy Information Administration, *Short-Term Energy Outlook* (July 2004), page 2.
[46] Comparing Energy Information Administration, *Petroleum Supply Annual 2004, Volume 1* (June 2005), Table 3 to Energy Information Administration, *Petroleum Supply Annual 2003, Volume 1* (July 2004), Table 3.
[47] Energy Information Administration, *Short-Term Energy Outlook* (April 2004), page 1.
[48] Energy Information Administration, *Short-Term Energy Outlook* (December 2004), page 1.
[49] Unaccounted for crude oil also increased in 2004.
[50] Energy Information Administration, *Monthly Energy Review* (October 2005), Tables 3.1a and 3.1b.
[51] Energy Information Administration, *Annual Energy Review* (August 2005), Table 6.7.
[52] Energy Information Administration, *Monthly Energy Review* (October 2005), Table 4.1.
[53] BP plc, *BP Statistical Review of World Energy* (June 2005), page 22.
[54] Energy Information Administration, *Monthly Energy Review* (October 2005), Table 4.1.
[55] Energy Information Administration, *Short-Term Energy Outlook* (June 2004), page 3.
[56] Energy Information Administration, *Short-Term Energy Outlook* (November 2004), page 2.
[57] International Energy Agency, Natural Gas Import Costs (database).
[58] Aggregate time series data from Form EIA-28 for 1977 through 2003 and previous editions of this report can be obtained from the EIA (http://www.eia.doe.gov/emeu/finance/page2.html).
[59] For the purposes of this report, the term "United States" includes the 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.
[60] The Fortune 500 is a list of the 500 largest U.S. corporations, ranked by revenues, published annually by *Fortune* magazine (http://www.fortune.com/fortune/fortune500).
[61] The sum of allocated operating revenue ($1,245 billion) exceeds corporate operating revenue ($1,128 billion) because allocated revenues include revenues from sales within the company and between different lines of business, in addition to the revenue from sales by the company to third parties (i.e., those outside the company). However, revenues from inter-segment sales are eliminated in calculating corporate operating revenue, which only includes sales by the company to third parties.
[62] Generally accepted accounting principles for the United States do not require that energy companies account separately for costs of oil production and natural gas production in company financial records. Various exploration and development costs cannot easily or separately be assigned to either oil production or natural gas production.
[63] Note that U.S. totals include royalty production, while the FRS companies' production levels do not. Thus, these calculations understate the FRS companies' share of crude oil and NGL production and natural gas production.
[64] Beginning with the 2003-reporting year, "other energy" operations include coal operations. Prior to 2003, coal was a separate line of business. Financial information for coal operations has been merged with that of the alternative energy operations, although the operating information related to coal continues to be collected.
[65] In particular, the FRS companies accounted for 29 percent of U.S. coal production in 1991, 15 percent in 1997, 7 percent in 1998, 3 percent in 2001, 1.7 percent in 2003, and 2.2 percent in 2004. These declines were due largely to the lack of profitability attributable to the coal operations of the FRS companies compared to other FRS operations, which averaged a 4 percent annual return over the period 1977–2002. Beginning in 2003, changes in Form EIA-28 prevented calculation of profitability for coal operations alone.